

Need an overview of Career Clusters?

- Career Clusters and the Core of Knowledge and Skills
- The 16 Career Clusters
- Connections: Career Pathways and Occupations to CTE Courses



Section 11: Instructional Planning with Career Clusters, Career Pathways, and Occupations

To help students investigate careers and design their courses of study to advance their career goals, the Office of Career and Technical Education in Virginia has adopted the nationally accepted structure of career clusters, career pathways, and sample career specialties or occupations. Detailed information about the States' Career Clusters Initiative appears at http://www.careerclusters.org.

Identification of Career Clusters

The 16 career Clusters are as follows:

- Agriculture, Food, and Natural Resources
- Architecture and Construction
- Arts, A/V Technology, and Communications
- Business, Management, and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science

- · Hospitality and Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections, and Security
- Manufacturing
- Marketing, Sales, and Service
- Science, Technology, Engineering, and Mathematics
- Transportation, Distribution, and Logistics

Career Clusters and Common Core of Knowledge and Skills

Each of the 16 career clusters has a common core of knowledge and skills required for career success in all the occupations included in the cluster. This core of knowledge and skills consists of the following elements, which may require different applications in different clusters. (For example, the academic foundations and technical skills needed in architecture and construction differ from those needed in health science.)

- Academic foundations
- Communication
- Problem solving and critical thinking
- Information technology
- Systems

- Safety, health, and environment
- Leadership and teamwork
- Ethics and legal responsibilities
- Employability and career development
- · Technical skills

Students who are exploring careers need to investigate the core elements to gain a comprehensive picture of, for example, the ethical issues surrounding Hospitality and Tourism industries and the similarities and differences between them and the ethics of Finance or Human Services.

Connection of Career Pathways and Occupations to CTE Courses

Each pathway within a cluster offers many occupations. Students may choose CTE and academic courses that will help them explore or prepare for a group of careers (a cluster), a group of careers within a cluster (pathway), or a single occupation.

The charts that follow show samples from two clusters and their associated pathways, sample occupations for one pathway, and a sample sequence of applicable CTE courses. The sequence applies to the pathways and occupations shown in italics.

Career Cluster	Career Pathways	Sample Occupations	Sample CTE Course Sequence
Agriculture, Food, and Natural	Plant Systems	Plant Breeder/Geneticist	To prepare for selected occupations:
Resources	Other pathways in this cluster:	Botanist	
	 Food Products and Processing 	Greenhouse Manager	Horticulture Sciences 8034 and one of
	Systems	Other occupations in this pathway:	the following:
	Animal Systems	Soil and Water Specialist	Greenhouse Plant Production and
	 Power, Structural, and Technical 	Certified Crop Adviser	Management 8035
	Systems	Tree Surgeon	• Landscaping 8036
	 Natural Resources Systems 	Education/Extension Specialist	• Floriculture 8038
	Environmental Service Systems	Golf Course Superintendent	• Floral Design I 8055
	Agribusiness Systems		Specialty Horticulture Arts 8037

Career Cluster	Career Pathways	Sample Occupations	Sample CTE Course Sequence
Education and Training	Teaching/Training	Director, Childcare Facility	To prepare for selected occupations:
	Other pathways in this cluster::	Childcare Worker	
	Administration and Administrative	Nanny	Early Childhood Education I 8285 and
	Support	Preschool, Kindergarten Teacher	a combination of one or more of the
	Professional Support Services	Teacher Assistant	following courses equivalent to a total
		Parent Educator	of two 36-week courses:
		Other occupations in this pathway:	Early Childhood Education II 8286
		Secondary Teacher	Family Relations 8223*/8225
		Special Education Teacher	Individual Development 8209*/8210
		Coach	Parenting 8231
		Teacher Aide	Introduction to Early Childhood
			Education 8234
			GRADS 8213 (with cooperative
			education)
			*18-week course

Career Planning Guide

The CTE Career Planning Guide (CPG) is being revised to reflect the national structure of career clusters. The CPG will be published in the fall. Users will be able to connect careers and courses in ways that will enhance career planning and preparation.

Other Career Resources

Check out the following resources for career planning by going to the Virginia Career Resource Network at http://www/vacrn.net/>.

- CareerConnect (Virginia's One Stop Workforce System)
- Guide to Career Prospects in Virginia
- KnowHowVirginia
- r u readv
- Virginia Career Resource Network
- Virginia Department of Professional and Occupational Regulation
- Virginia Employment Commission
- Mid-Atlantic Guide to Information on Careers (MAGIC)
- Virginia's Electronic Labor Market Access System (VELMA)
- Virginia Career VIEW Career Information

Reporting by Career Cluster

In addition to using career clusters for student career exploration and instructional planning, local school divisions report to the USDOE the numbers of students who are exploring or preparing for each career cluster. To help teachers and administrators with this report, the *Career and Technical Education Reporting Systems (CTERS)*User's Manual assigns each CTE course to a career cluster. These career cluster assignments are repeated in the program area sections of this guide. Because some career clusters overlap (have similar occupations), teachers may have a choice of more than one cluster and should select the most appropriate one for their report.